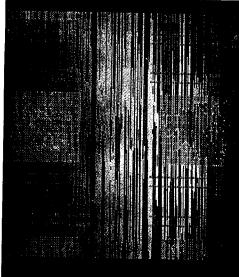


1. Cp - 11

IIII

Highlights of the year:		in millions share amounts) 1980
Gross income from sales, rentals and services.  Earnings before income taxes  U.S. Federal and non-U.S. income taxes.  Net earnings  Per share  Cash dividends paid  Per share  Investment in plant, rental machines and other property  Return on stockholders' equity	\$ 29,070 \$ 5,988 \$ 2,680 \$ 3,308 \$ 5.63 \$ 2,023 \$ 3.44 \$ 6,845 19.1%	\$ 26,213 \$ 5,897 \$ 2,335 \$ 3,562 \$ 6.10 \$ 2,008 \$ 3.44 \$ 6,592
At end of year:  Total assets Net investment in plant, rental machines and other property.  Working capital Long-term debt. Stockholders' equity. Number of employees Number of stockholders	\$ 29,586 \$ 17,278 \$ 2,983 \$ 2,669 \$ 18,161 354,936 742,162	\$ 26,703 \$ 15,017 \$ 3,399 \$ 2,099 \$ 16,453 341,279 737,230



Cover: IBM's technological leadership in computer circuit packaging is reflected in this 24 x 28-inch copper wiring plane in the IBM 3081, the company's most powerful system. Part of the densest circuit packaging yet reported in the industry, the plane is one of 20 layers in a /s-inch-thick printed circuit board that contains more than a kilometer of wire interconnections. Each board helps connect 225,000 logic circuits and more than 1.5 million memory bits of information. By shortening the distance electrical signals must travel, the high-density packaging contributes to improved internal performance of the IBM 3081. The packaging design also enhances reliability and reduces production costs.

## Contents:

- 1 Highlights of the Year
- 2 Letter to Stockholders: Management comments on the year's financial results and the outlook for continuing growth in IBM's business
- 6 More Productivity
- 20 Stockholder Information
- 21 Financial Report
- 40 IBM Organization
- 43 Progress Report on other 1981 developments involving IBM employees and business programs
- 48 Directors and Officers

## IBM's Operations:

IBM's operations, with very minor exceptions, are in the field of information-handling systems, equipment and services to solve the increasingly complex problems of business, government, science, space exploration, defense, education, medicine and many other areas of human activity. IBM's products include data processing machines and systems, telecommunications systems and products, information distributors, office systems, typewriters, copiers, educational and testing materials, and related supplies and services. Most products are both leased and sold through IBM's worldwide marketing organizations.

## To the Stockholders:

John R. Opel, President and Chief Executive Officer / Frank T. Cary, Chairman of the Board



1981 was a good year for IBM. Orders and product shipments were strong, although earnings were down because of currency translation. Major capital expenditures over the past several years have established a foundation for long-term growth.

Worldwide net earnings for the year ended December 31, 1981, were \$3,308 million, compared with \$3,562 million for 1980. Net earnings were \$5.63 per share on 587.8 million shares, the average number outstanding during the period, compared with \$6.10 per share on 583.5 million shares, the average number outstanding in 1980.

Consolidated gross income was \$29,070 million, compared with \$26,213 million in 1980. Net earnings for the quarter ended December 31, 1981, were \$1,081 million, or \$1.83 per share, compared with \$1,233 million, or \$2.11 per share, for the same period in 1980. Gross income was \$8,993 million, compared with \$7,805 million for the fourth quarter of 1980.

Operations outside the United States during 1981, included in consolidated results, yieldec net earnings of \$1,239 million, compared with \$1,902 million in 1980. Gross income from those operations was \$13,982 million, compared with \$13,787 million in the prior year.

The stronger U.S. dollar, relative to other major currencies during 1981, had a severe impa on period-to-period comparisons of financial results. While the translation of assets and

liabilities resulted in exchange gains, the translation of income and expenses of the non-U.S. operations had a significantly adverse effect on results.

The translation of assets and liabilities recorded or denominated in currencies other than the U.S. dollar was the principal factor in the exchange gains of \$94 million and \$24 million in 1981 and 1980 respectively. The fourth quarter of 1981 results include exchange losses of \$4 million compared with gains of \$36 million in the final quarter of 1980. These gains and losses from translation are principally unrealized.

The effects of currency rate changes on business volumes, pricing and other operating decisions which have an impact on income and expenses of non-U.S. operations cannot be quantified. However, disregarding these economic effects, it is estimated that if the currency rates used to translate income and expense had remained the same as in 1980, gross income would have been over \$2 billion greater and consolidated net earnings would have been over \$600 million greater.

Gross income from sales of data processing equipment for the year and the fourth quarter increased substantially over the corresponding periods of 1980. Gross income from all sales, including data processing equipment, increased 18.2% over 1980. Gross income from rentals and services increased 5.7%, with services increasing 20.4% and rentals decreasing .3% over the corresponding 1980 amounts.

Incoming orders and shipments of data processing equipment were at high levels and showed strong growth rates during 1981, with the year-end backlog of orders somewhat higher than in the previous year.

## Large Growth Potential

World economies have an almost universal need for greater productivity as they struggle with inflation and intensifying competition. As a consequence, we find a large and growing demand for information products—a demand that from every indication will be long-term. The major part of IBM's growth will continue to come from our traditional business base—the application of data processing and office products in business, science, government and education.

## Basic Business Goals

In order to take full advantage of the demand potential, we have three basic IBM goals for the 1980s First, it is our goal to be the product leader—to excel in technology, reliability, maintainability and value. We want to be foremost in quality, providing machines and systems that are as defect-free as they can be made.

Second, it is our goal to be the most efficient company in our industry-not only in manufacturing, but also in the development, marketing and service of our products.

Third, it is our goal to compete in, and grow with, the information industry in all its aspects

## Ensuring Quality

Product quality has played a key role in the company's success over the years. Today, because of our more advanced products, our larger product volumes, and the variety of ways customers are installing and using our systems, the quality challenge is more imposing than ever. To help meet it, we have established a corporate function to coordinate all our quality programs worldwide. Emphasis in every part of the business will be on doing each job right the first time.

## Productivity in IBM Operations

As we have so often in the past, we are making many changes and adopting new methods to improve our own productivity—in the laboratories and plants and throughout our marketing, distribution, service and administration. We expect productivity gains from a realignment of our worldwide marketing structures. The three U. S. divisions that marketed larger computers, smaller computers and office products have been consolidated into two new divisions that sell our full line of information systems and products. A single marketing team can now supply all of a customer's product needs. We are making a similar realignment outside the U.S., where

we had a separate division marketing small computers and office products in 20 countries. That activity has now been consolidated into our IBM World Trade subsidiaries.

We are also realigning U.S. plant and laboratory operations into two new groups to take better advantage of new technology and improve long-range planning.

At the plant/laboratory locations, we continue to increase our use of advanced technology in the manufacture, design and testing of products. Further savings are coming from computer-controlled automation of IBM warehouses and from new tools and techniques that simplify the installation and service of our products.

## New Products

To aid customer productivity, we brought significant new products and technology to market in 1981 across the full range of our product line. Through technical innovation, we continued to lower the cost of information processing and also offered customers a broader set of price/performance options. Among the new product developments:

- ... We began shipping the industry's most advanced computer disk file, the IBM 3380, which uses "thin film" technology to read or write data at 3 million characters a second.
- ... A new model of our most powerful computer, the IBM 3081, has internal speeds up to 40% faster than previous models. The logic and memory packaging in the IBM 3081 is the densest available in the industry.
- ... The IBM Personal Computer can be used in many productive ways in the office or at home.
- ... The IBM Datamaster is the company's newest low-priced computer designed specifically for business applications. It is easy to use and can handle text processing as well as data processing.
- ... Several new models of the IBM 4300 and IBM 8100 processors simplify system use and give customers added flexibility in choosing the computing power and memory size that will best meet their processing needs.
- ... The IBM Displaywriter, an office system widely installed in many countries, now has greater file processing and communications capabilities, enabling it to handle many more office tasks.
- ... A new IBM voice message distribution system utilizing the IBM Series/I permits people using telephones to record, play back, change and forward messages to one or several persons, under computer control.

## Higher-Volume Marketing

These and other IBM products are doing more and more work at lower cost, stimulating new uses of our equipment. As a result, we are dealing with larger numbers of customers and prospective customers. In response to that, we are introducing new marketing approaches to make our products more readily available. Twenty-one IBM retail product centers for office machines and small systems were opened in 1981, bringing the total to 33. Of those, 13 are in the U.S. and 20 in other countries.

We began marketing the IBM Personal Computer through Sears, Roebuck and Co.'s business systems stores, as well as through some 190 ComputerLand Corp. dealers in the U.S. and Canada. We also began marketing through distributors, authorizing seven U.S. firms to sell certain smaller IBM products, including a computer display terminal and a keyboard printer.

In addition, we expanded sales to other manufacturers, offering an IBM disk file assembly for integration into systems marketed by the other firms.

## Expansion to Meet Demand

In expanding our capacity to meet record demand and to grow with the industry, we have completed close to 11 million square feet of new plant and laboratory buildings in 11 countries

over the past three years. Counting leased facilities, we have added more than 22 million square feet of plant and laboratory space in the past five years—one-third of our current total.

As these facilities come on line, we are realizing an increasing return from our sizable capital spending for greater productive capacity. That capacity is helping us ship products in quantities of hundreds of thousands each year. We are currently building nearly 4 million square feet of additional plant and laboratory space worldwide.

## Justice Department Ends Lawsuit

On January 8, 1982, the United States Justice Department withdrew its 13-year-old antitrust lawsuit against IBM. After a comprehensive review of the case, the department's Antitrust Division concluded that the case was "without merit and should be dismissed." In withdrawing the suit, the Justice Department in effect affirmed the rulings of many Federal courts and what we have contended from the start: Our industry is healthy and competitive, and IBM has not violated the antitrust laws. The case was burdensome, and while we never doubted its ultimate outcome, we are happy that it will not have to drag on through the courts for years to come.

Our General Counsel, Nick Katzenbach, has led our legal affairs over the entire period, and we are very indebted to him. Our deep thanks also go to the many IBM people who worked long and hard on IBM's defense, and to Tom Barr and his Cravath, Swaine & Moore litigation team that so ably represented the company throughout these stressful times.

In June, 1981, the United States Supreme Court let stand a lower court's directed verdict in favor of IBM in an antitrust suit filed by the Memorex Corporation.

Since 1968, a total of 25 antitrust suits have been brought against IBM, none of which has been substantiated in the courts. Two remain on appeal from court decisions that favored IBM.

The European Economic Community continues to seek modification of certain IBM business practices in the Common Market area. However, most of the practices involved have already been held by U.S. courts to be legitimate competition.

The difficult period of U.S. antitrust litigation is now behind us. We are gratified that so much opinion, in and out of the courts, has supported our conviction that IBM has achieved its business success through fair and ethical competition.

#### D.R. McKay to Retire

On February 28, 1982, Dean R. McKay will retire as IBM Senior Vice President after nearly 36 years of service, more than 20 of those years as a corporate officer. Few executives have contributed to IBM in so many varied ways. For the last several years, he has been a member of the Board of Directors and the Corporate Office. His broad understanding of the business, knowledge of international issues and astute judgment have made him a most valuable asset to the company.

## For the Future

In meeting the competitive tests of a changing industry, IBM's most important asset is the tremendous resource of skill and experience represented by IBM men and women in the many countries where we operate. We are deeply grateful for their hard work, creativity and dedication. Our people are IBM's best assurance of quality—in our products and service and in all else we do to take advantage of the opportunities that promise so much in the years ahead.

January 26, 1982, by order of the Board of Directors

Frank T. Cary

Chairman of the Board

John R. Opel

President and Chief Executive Officer

## More Productivity...

At a time when world economies are straining for answers to high inflation and lagging output, the demand for information products continues to outrun supply.

Why? The answer lies in the world's need for more productivity. Manufacturers seek lower costs on the plant floor, while improving quality and maintaining schedules. Governments at all levels search for ways to serve many needs while staying within limited budgets. Farmers strive for healthier crops and livestock while making optimum use of feeds, fuel and equipment. Small businessmen find they must tighten management of inventory, sales and receivables to match increased competition.

For these and many other needs, information products can be an important part of the answer. They are almost infinitely adaptable to each user's requirements. They are available at many price and performance options. Users can choose small or large files for quick storage and retrieval of information...versatile low-cost computers easy to set up and use...office systems with many features that simplify and speed paperwork...powerful computers for complex tasks...communications systems that let widely separated parts of an organization operate smoothly as part of the whole.

And the cost of all this capability, per unit of work, keeps going down.

Because information products meet many needs so well, they are appearing everywhere—in the warehouse, in the emergency room, at the sales counter, in the classroom, at the secretary's desk, in the fire station, in the home, outside the bank and in the town hall. And no limit to this multiplying use throughout society appears in sight.

Pictured here and on the following pages are some of the ways that IBM customers, as well as IBM's own operations, are finding more productive ways to get their work done.

The Government of Brazil uses an IBM computing center to process its census of 123 million people, as as to study the best economic uses of agriculture, transportation, communications and other national resources.





IBM computer graphics are used by a large U.S. mining corporation to evaluate the potential of exploration opportunities.





Field surveys of animal and plant life for use in land development are among many government applications of IBM computers that serve the growing population of Australia's Northern Territory.



A large furniture manufacturer in Japan uses IBM

computer display terminals to offer customers different color combinations of office decor. In addition, the company has installed more than 175 IBM color or monochrome display units for greater productivity in purchasing, inventory, production control and personnel, as well as office planning.

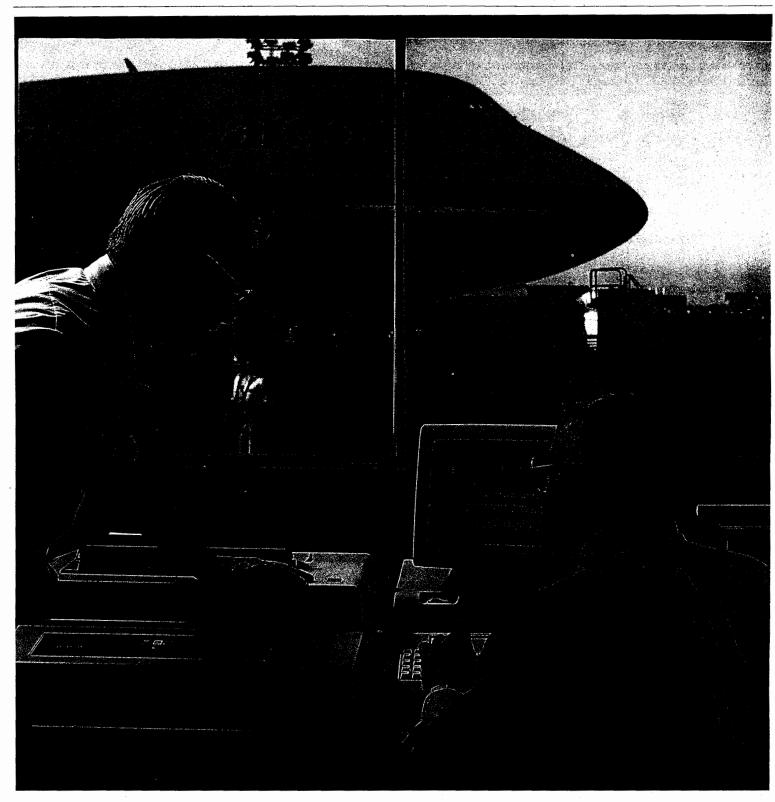
An agricultural association in Reims, France, uses an IBM System/38 computer to help more than 4,000 farmers and wine producers, such as this champagne-producing family business, efficiently manage all phases of their accounting.



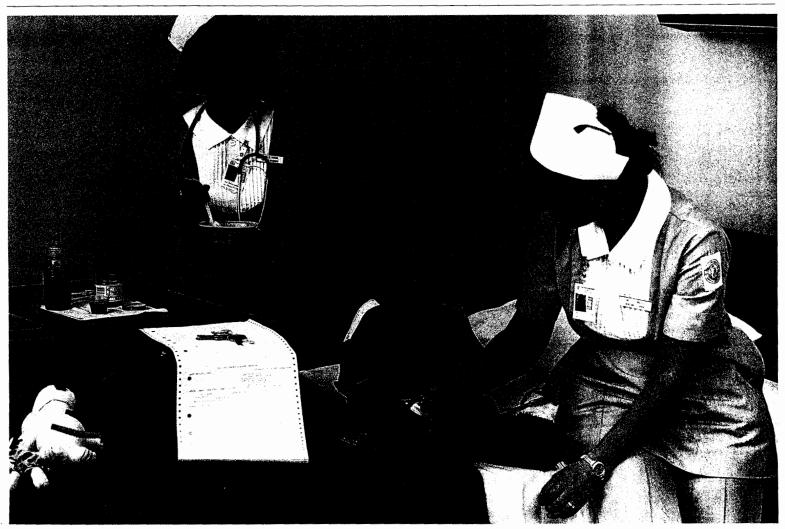
The Los Angeles County Fire Department fights fires and meets other emergencies with the use of IBM computers for optimum dispatching of 700 vehicles and 2,200 uniformed employees from 128 fire stations.

## More User Productivity...

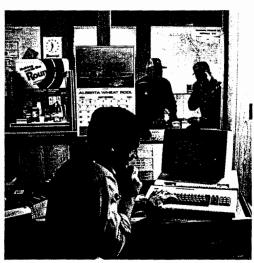
A large Pacific Coast aircraft manufacturer has inst. 25 IBM Displaywriters for more productive text edit administrative typing in its advanced technology, cc puter services, legal and other departments.



A Brooklyn hospital is one of many hundreds in the U.S. and other countries around the world that use IBM computers for greater operational productivity. IBM systems aid doctors and staffs in departments such as pediatrics, pharmacy, radiology and physical therapy and also meet many administrative needs.



A wheat cooperative serving 56,000 farmers in Alberta, Canada, operates a network of IBM computers installed at more than 120 grain elevators for daily inventory and sales accounting. Farmers use the system to obtain up-tothe-minute information on wheat prices.



The International Committee of the Red Cross, Geneva, Switzerland, uses an IBM computer to keep records that help trace more than 500,000 "boat people." Hundreds of letters are processed in order to help restore communication and reunite separated families in all parts of the world.



## More Productive New Products...

Business applications, such as accounts receivable and word processing, can be run on the new IBM Persona Computer, as well as applications covering personal finance and video educational games for the family. Programs are available on magnetic tape or diskette (below).

New IBM computers and office machines offer customers greater productivity across the company's product line-from IBM's lowestcost system, the IBM Personal Computer, to the most powerful computer the company has yet developed, the IBM 3081 Model Group K.

With internal operating speeds up to 40% faster than current processors, the new IBM 3081 model provides as many as 32 million characters of main memory and 24 channels for the transfer of data.

The large-scale IBM 3081 processors feature very dense packaging of circuits, shortening the electrical paths. IBM design engineers have eliminated an entire level of computer packagingthe circuit card-permitting direct connection of logic and memory chip modules to larger circuit "boards."

Also introduced were new models of the IBM 3033 processors, now serving as the powerful central computers for hundreds of large customer installations. Enhancing the performance of the IBM 3033 and IBM 3081 processors are more advanced versions of IBM's large-system control programs-Multiple Virtual Storage and Virtual Machine/370.

## Advanced Disk File Shipped

Customers began receiving delivery of the IBM 3380 disk file-high-capacity storage for large IBM systems. The file's "thin film" head can read and write data at 3 million characters a second-the first device in a commercial product to achieve such a rate. The IBM 3380 also offers the largest information capacity per disk file yet delivered in the industry-2.5 billion characters.

Compared with the industry's first disk file, the IBM RAMAC 305 of the mid-1950s, the new IBM 3380 stores 6,000 times as much information per square inch of disk surface and retrieves data 37 times faster, at 1/150th the cost per character.

#### Personal Computer Introduced

The company's smallest system-the new IBM Personal Computer - is an easy-to-use system designed for business, school and home use. It sells for as little as \$1,565. A starter system includes a powerful microprocessor with a movable



keyboard. It can be connected through adapters to any color or black and white television set. The computer can be expanded to include its own display, an 80-character-per-second printer with 12 different type styles, and storage tape cassettes and diskettes. The system can generate and display charts, graphs, text and numerical information in a wide variety of hues on a standard color television set.

Program packages developed for the IBM Personal Computer by several other firms cover selected business, education and home applications. IBM has also established a software publishing department that will publish programs written for the IBM Personal Computer by IBM employees working on their own time, as well as programs from independent software firms and other authors.

### Low-Cost Business System

Another small computer introduced in 1981-the IBM System /23 Datamaster-is the company's lowest-priced system developed specifically for commercial use. It is designed to handle a broad variety of business applications for small firms or departments of large corporations. Customers may combine data processing-including payroll, billing and inventory-with word processing, such as individualized business correspondence. A basic Datamaster installation consists of a computer workstation, diskette storage and printer. The system's BASIC language compatibility with the larger IBM System/34 offers customers a convenient growth path in data processing.

#### Intermediate Processor Models

1BM significantly broadened its intermediatesize computer offerings during the year. Four new IBM 4300 processors were introduced. Included were an entry-level IBM 4321 and a more powerful IBM 4331 processor. Simplified control programming for those two systems reduces the data processing skills needed to install and operate them. In addition, new and enhanced models of the more powerful IBM 4341 computer give customers broader flexibility in choosing the price/performance options best suited to their processing needs.

Three new IBM 8100 processor models were introduced, providing up to 60% more processing power and twice the memory size previously available. They help users expand distributed processing networks more productively.

## Enhanced Displaywriter System

IBM has significantly enhanced the low-cost IBM Displaywriter system, which has been installed by thousands of customers in the U.S. and 36 other countries. The addition of information file processing plus communications programming support makes the 1BM Displaywriter a multifunction text processing terminal for a wide range of office applications. Customers can merge text and arithmetic data to produce correspondence, statistical summaries and management reports.

## More Productive New Products...

## Office Systems Communication

Enhancements of the IBM Displaywriter, IBM 5520 administrative system and IBM 8100 information system are part of a planned series of measures to provide communications support across different IBM office systems offerings. Operators of the different systems will now have much greater flexibility in handling tasks involving both word processing and data processing.

## High-Performance Office Products

An improved model of the IBM 6670 information distributor permits data to be sent and received at more than 1,000 characters a second. The IBM 6670 combines electronic communication with high-speed laser printing for both word processing and computing applications. The new Model II prints multiple sets of documents more efficiently and simplifies use of the machine's many type styles.

The quality of IBM "Selectric" typewriters was demonstrated at the 1981 Intersteno Congress in Mannheim, Germany, where IBM "Selectrics" were used by the new world champions in both speed and perfection typing. The gold medal championship speed was 683 characters per minute, while the top perfection rate was 591 characters per minute. The silver and bronze medalists also used IBM "Selectrics." Of the 330 contestants from 16 countries, more than 80% used IBM "Selectrics."

## Phone Message Productivity

A telephone voice distribution system that uses a computer to process spoken messages was introduced during the year. The IBM Audio Distribution System (ADS) enables people using a telephone in widely different time zones to record, hear, change and transmit messages conveniently to one or several other persons.

The system's many easy-to-use functions can improve productivity for managers, professionals and others who frequently communicate by phone. For example, ADS permits distribution of messages to predetermined lists of people. Or, a user may send a voice message and specify the date and time of its delivery. Each ADSan IBM Series/1 computer with communications adapters and software developed by IBM-can serve up to 1,000 designated users. The system connects to public or private telephone networks.

Through a standard telephone handset, the user's voice message is recorded and placed in the computer's disk storage, then transmitted to be heard by one or more other persons as specified by the originator. The computer reconverts digital pulses into voice tones recognizable as the originator's. ADS will call repeatedly until a busy line is free and also permit senders to learn if and when messages are received. Through security passwords, users can control access to confidential messages.

The system originated in the Research Division, where prototypes have been operational for several years.

## Products for Specific Needs

A variety of new IBM computer products are designed to meet the requirements of different industries. For example, the IBM 4700 banking system offers higher performance than previous products, compact size and user-comfort design for greater productivity in the processing of savings, loan, checking and other transactions. Equipment includes displays, keyboards, magnetic stripe reader/encoder, printers and communication controller-all compatible with existing IBM teller banking products.

A new tabletop IBM printer for use with the IBM System/34 computer can print more than 10,000 graphic symbols, or ideographs, of the Japanese and Chinese languages.

Users of IBM's new voice message distribution system employ standard touch-key telephones to give a wide variety of message-handling instructions.



## **New Analytical Instruments**

Three high-performance analytical instruments were introduced by IBM Instruments, I: in 1981. A microprocessor-controlled liquid chromatograph helps chemists separate comple mixtures into component parts. It has many applications in research, quality control and er ronmental analysis. A new infrared spectromer is designed to analyze gases, liquids and solids for a broad range of applications in the pharmaceutical, food, petrochemical, semiconducto and biomedical fields. A new spectrometer wit a superconducting magnet enables chemists to study the molecular structure of hydrocarbo and other compounds. It has applications in the chemical and petroleum industries and i biomedical research.



New IBM "Synergetix" furniture can be quickly adjusted to convenient positions by users of computer terminals and office systems. Other adjustable units include a desk, tabletop extensions and upholstered cha The furniture is offered in a variety of colors.

Many features that simplify installation and operation by first-time computer users are built into the new IBM System/23 Datamaster. Eighty of the small business systems were demonstrated at this IBM seminar for customers and prospects in New Jersey.





Left: Key members of the design team discuss new "extended architecture" they helped develop for the large-scale IBM 3081 computer. Their design extension permits direct addressing of 2 billion characters of main memory, as well as a doubling—to more than 4,000—of the number of storage and input-output devices that can be simultaneously linked to the system.

## More Productive Marketing and Service...

Toll-free telephone and mail sales of IBM office machines and supplies increased by one-third in the U.S. during 1981. Sizable telephone/mail sales gains were also recorded in other countries where IBM employs such marketing techniques—Australia, Canada, the Netherlands, Switzerland and the United Kingdom.



IBM announced a realignment of its marke structures in the U.S. and IBM World Trade tries in 1981 to permit more productive sal and distribution of computers and office productive the marketing ca full line of products to a customer by one keting team (details, page 40).

IBM also continued to broaden and ex its marketing channels, while finding produnew ways to meet customer service needs.

Retail product centers for IBM office I and small computers were opened in 8 moi U.S. cities and 10 more outside the U.S. A 30 stores are now operating in such cities a Baltimore, Boston, Brussels, Buenos Aires, London, Los Angeles, Paris, Philadelphia, Scisco, Stockholm, Sydney and Washington,

The product centers, which compleme sales force, provide customers with a conve way to see and buy a wide range of IBM prosupplies and services. The U.S. stores, for example, offer demonstrations of the new System/23 Datamaster and the IBM Persona Computer, as well as IBM typewriters, copidictation equipment. The product offerings in countries outside the U.S.

Small product centers in three New Y City branches of The Chase Manhattan Ba opened in 1981–IBM's first sales outlets in branches. Staffed by IBM specialists, the sr stores offer a selection of products sold at larger IBM centers.

Sales through other retailers were ina rated during the year. The new IBM Person puter is being marketed through Sears, Roc and Co.'s new business system centers now open in five U.S. cities. It is also being sold more than 190 ComputerLand Corp. deale parts of the U.S. and Canada.

Marketing through distributors was also begun in 1981 with the designation of U.S. firms to distribute selected IBM produ These authorized distributors sell the prod other manufacturers as well. They offer cu ers configurations of equipment to meet paneeds, technical support and special terms conditions. Being marketed in this way are computer display terminal and a multiple-ukeyboard printer. These are relatively low-products of the kind that distributors markefficiently in large volumes.

Dominant red theme and pedestal spotlighting of product demonstrations are design features of the new IBM retail product centers now open in the U.S.



Sales to other manufacturers were also initiated in 1981. The IBM 680 disk assembly, which stores 64 million characters on six 8-inch disks, is being sold to other manufacturers for integration into their own system offerings.

Greater service productivity is resulting from a variety of IBM technical advances in 1981 and recent years. These include (1) original design of products for increased reliability and serviceability, (2) better service tools and techniques such as the diagnostic "briefcase" computer carried by IBM personnel at customer sites, (3) a central diagnostic computer data bank that customers can reference through their own terminals, (4) emphasis on "customer setup," permitting computer units or entire systems to be installed with little need for IBM assistance, (5) highly automated warehouses

that reduce costs and the time required for parts distribution, and (6) a toll-free telephone service that permits U.S. customers using many IBM program products or system control programs to obtain software information at any hour, seven days a week.

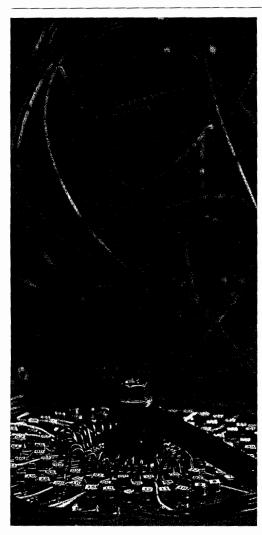
IBM is installing new communication centers in some 30 U.S. cities to improve productivity in answering customer equipment service calls. The computer-assisted radio dispatch system uses display screens to tell operators quickly which customer engineer can best be assigned to meet a particular service need.



## More Productive Manufacturing...

The quality of thousands of computer circuit parts is being ensured by advanced-technology IBM test systems used in both design and production. In less than a minute, this computer-controlled device can test a silicon wafer with more than 100 logic and memory chips that contain thousands of transistors.

IBM is now producing hundreds of thousands or input/output products worldwide each year. The announced IBM 3232 desktop printers shown or off the line at the company's new Charlotte, N.C print up to 450 characters a second.



IBM's substantial investment in new facilities to meet record worldwide demand is steadily raising output as new construction comes on line. Being incorporated into the new buildings are advanced-technology processes designed to ensure product quality in all phases of development and manufacture.

## High Construction Rate

In 1981, IBM completed 4.5 million square feet of plant and laboratory space companywide, bringing the total for the last three years to nearly 11 million square feet in 11 countries. The production buildup is continuing, with close to 4 million square feet of new plants and laboratories now under construction in the U.S. and five other countries. In mid-1982, for example,



IBM will start operations in a new 758,000-squarefoot facility in San Jose, Calif., with advanced processes to increase production of the IBM 3380 "thin film head" disk file and other new highcapacity disk files using the same technology.

Scheduled for early 1982 startup is a second IBM manufacturing site in Italy-a 303,000-square-foot plant at Santa Palomba. IBM Italy's Vimercate plant has recently been enlarged by 342,000 square feet, or 40%. The two plants produce the bulk of Europe's requirements for small IBM computers and office systems, as well as retail store systems and terminals.

Counting leased space plus new construction, IBM in the past five years has expanded its manufacturing and laboratory facilities by more than 22 million square feet.

## Premium on Quality

IBM's continuing program to ensure properties of the properties of

Other advanced IBM circuit test facili are in Burlington, Vt., Manassas, Va., and Poughkeepsie, N.Y., as well as in Essonnes and Sindelfingen, Germany.

The productivity of IBM Japan's Yasu computer plant is enhanced by an automated materials distribution center that supplies production lines with more than 55,000 different parts.

### **Automated Warehouse Productivity**

IBM manufacturing plants are saving millions of dollars annually through operation of highly automated materials distribution warehouses. The computer-controlled facilities supply production lines with tens of thousands of different parts as needed. Six such warehouses are now operating in the U.S., Canada, France and Japan. Under construction are warehouses at IBM plants in Austin, Tex.; Boca Raton, Fla.; Charlotte, N.C.; Endicott, N.Y.; and Tucson, Ariz.; as well as in Berlin, Germany; Bromont and Toronto, Canada; Fujisawa, Japan; Greenock, Scotland; and Jarfalla, Sweden. Similar IBM automated warehouses are used in France, Germany and the U.S. for field distribution of IBM products and replacement parts. For example, a 300,000square-foot IBM warehouse complex nearing completion in Mechanicsburg, Pa., will store and retrieve more than 90,000 different IBM maintenance parts, speeding response to some 1.7 million field requests annually.

Controlling the warehouses are a variety of IBM computers linked to multiple display units and other terminals. Materials-handling and control equipment includes laser scanners, automatic cranes, power-driven conveyors, driverless transport systems and optical and magnetic label-reading devices. Typical cost savings have ranged from 20% to 40%, compared with non-automated installations.

## Supplementary Vendor Production

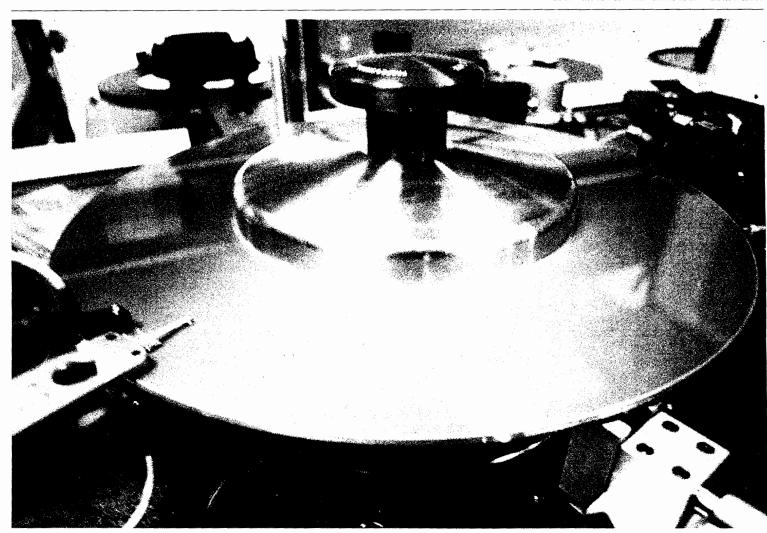
As record demand stretches capacity, IBM plants and laboratories are using vendor resources to help meet requirements. IBM produces substantially all its own advanced electronic devices. However, in 1981 the company purchased some 12,000 different types of electronic components worldwide from more than 200 outside suppliers. IBM works closely with many suppliers on quality control measures aimed at preventing defects during production processes.

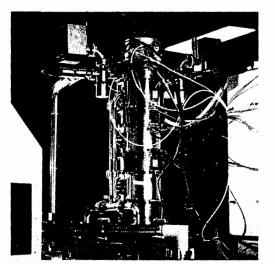
Overall, IBM plants and laboratories purchase more than one-quarter million different products, parts and assemblies from nearly 100,000 suppliers.



## More Productive Technology...

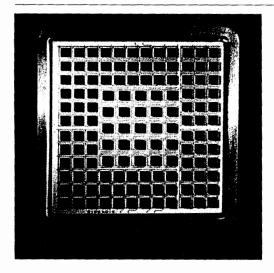
Quality-testing of every magnetic disk used in IBI computers is provided by advanced IBM-designed machines. This highly automated equipment has special read/write heads that can detect imperfec as minute as a few millionths of an inch in diamet



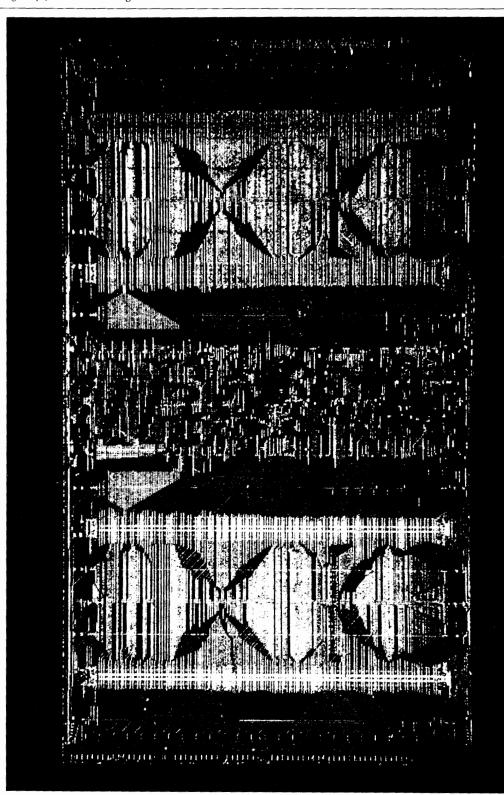


An IBM-designed electron-beam machine is now interconnecting circuits on as many as 2,000 highcomputer chips per hour. This is the fastest produc rate reported for the lithographic electron beam pr A beam narrower than 1/10,000th of an inch trace intricate circuit patterns under computer control.

Experimental IBM computer memory chip (3/8 inch long) can store over 288,000 bits of information-four times as much, in only twice the area, as the densest chips currently manufactured by IBM. The chip's threedimensional features are shown by different color light rays, directed at low angles over its surface.



The 133 electronic chips on each 3½-inch-square substrate in the new IBM 3081 Model Group K computer are part of the densest circuit packaging yet reported in the industry. Each such unit contains 10,000 logic circuits and 300,000 memory bits of information.

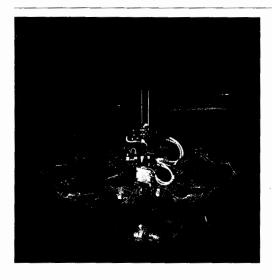


## Stockholder Information...

mation available to IBM stockholders and the general public.
Stockholders regularly receive the following:

The Notice of Annual Meeting and Proxy Statement,

The Annual Report is only one of the sources of infor-



IBM robotic machines are being test-marketed for general-purpose applications in light manufacturing and assembly. The multifunction, programmable machines are designed for interactive computer control of industrial tasks that place a premium on speed, accuracy and product quality.



A separate service processor for the large IBM 3081 computer constantly monitors the system's 1,120,000 logic circuits through 26,000 sensing points. Advanced software enables the service processor to identify most error conditions automatically and recommend corrective action.

mailed to each stockholder in March, describes the items of business to be voted on at the Annual Meeting. The Proxy Statement also provides biographies of the Board's nominees for director, their IBM shareholdings, their principal affiliations with other companies or organizations, and other information about the company.

The Report of the IBM Annual Meeting, published in June, summarizes the activities at the Annual Meeting, including the President's report on the company, questions and answers of general interest, and the results of voting on items of business.

The following additional information may be obtained without charge from the IBM Stockholder Relations
Department, 717 Fifth Avenue, New York, N.Y. 10022:

## The Form 10-K Annual Report

to the Securities and Exchange Commission provides further details on IBM's business, including a list of subsidiaries not contained in the Annual Report. Form 10-K is available in April.

The Form 10-Q Quarterly Report to the Securities and Exchange Commission is available in May, August and November.

## A Transcript of the Annual Meeting.

An IBM Dividend Reinvestment Plan Booklet explains how stockholders may automatically reinvest dividends toward the purchase of additional shares of IBM stock, as well as make optional additional investments for that purpose.

IBM Equal Opportunity Programs

in the United States are outlined in a document that describes programs for women, minorities, handicapped persons, disabled veterans and Vietnam-era veterans, and also reviews IBM's affirmative action efforts in the community.

## **IBM Business Conduct Guidelines**

is a booklet sent to IBM employees worldwide describing the ethical and business principles that the company sets for the conduct of its business. The booklet was first issued in 1961. The current edition has been translated into 15 languages.

IBM U.S. Retirement Plan Information, which is given to all regular U.S. employees cludes the principal provisions of the plan, c available, a list of the trustees and a summa report on the plan's financial status.

## IBM support programs

for education, community service, hospitals arts and other areas are summarized in a re to U.S. employees.

## IBM Operations in South Africa

are summarized in a report of the company business in that country. This report contai statement of personnel principles and practic to which IBM adheres in doing business in South Africa.

IBM Annual Report translations and record are available. The report is translated into French, German and Japanese. An audio carecording in English is available for the blin

#### Service for Deaf Stockholders.

The IBM Stockholder Relations Department service that enables deaf stockholders who access to a teletypewriter to communicate v department's New York City office. Stockhowho wish to use the service should dial the IBM number (212) 223-3150 between 9 a.m. 5 p.m., New York time, on any weekday.

### IBM Stock Transfer.

The IBM Stockholder Relations Department located at 717 Fifth Avenue, New York, N. Y. maintains the stockholder records, transfers stock, and can answer questions regarding sholders' accounts. Stockholders wishing to transfer stock to someone else or to change name on a stock certificate should contact t department for instructions. Stock certificate valuable and should be safeguarded, since replacement takes time and requires payment a surety bond premium by the stockholder. If a stock certificate is lost, stolen or destroy Stockholder Relations should be notified. Remail should be used whenever stock is mail-

## The 1982 Annual Meeting

of stockholders will be held in the Civic Auditorium, Jacksonville, Florida, on Mond April 26th, at 10 a.m. A notice of the meeting, proxy statement, and proxy voting card be mailed to stockholders in late March.

## Financial Report

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## Report of Management

Responsibility for the integrity and objectivity of the financial information presented in this Annual Report rests with IBM management. The accompanying financial statements have been prepared in conformity with generally accepted accounting principles, applying certain estimates and judgments as required.

IBM maintains an effective system of internal accounting control. It consists, in part, of organizational arrangements with clearly defined lines of responsibility and delegation of authority. We believe this system provides reasonable assurance that transactions are executed in accordance with management authorization, and that they are appropriately recorded, in order to permit preparation of financial statements in conformity with generally accepted accounting principles and to adequately safeguard, verify and maintain accountability of assets. An important element of the system is an on-going internal audit program.

To assure the effective administration of internal control, we carefully select and train our employees, develop and disseminate written policies and procedures, provide appropriate communication channels, and foster an environment conducive to the effective functioning of controls. We continue to believe that it is essential for the company to conduct its business affairs in accordance with the highest ethical standards, as set forth in the IBM Business Conduct

Guidelines. These guidelines, translated into numerous languages, are distributed to employees throughout the world, and reemphasized through internal programs to assure that they are understood and followed.

Price Waterhouse, independent accountants, are retained to examine IBM's financial statements. Their accompanying report is based on an examination conducted in accordance with generally accepted auditing standards, including a review of internal accounting controls and tests of accounting procedures and records.

The Audit Committee of the Board of Directors is composed solely of outside directors, and is responsible for recommending to the Board the independent accounting firm to be retained for the coming year, subject to stockholder approval. The Audit Committee meets periodically and privately with the independent accountants, with our internal auditors, as well as with IBM management, to review accounting, auditing, internal accounting controls and financial reporting matters.

John R. Opel
President and Chief Executive Officer

Dean P. Phypers Senior Vice President, Finance & Planning

## Report of Independent Accountants

To the Stockholders and Board of Directors of International Business Machines Corporation

In our opinion, the accompanying consolidated financial statements, appearing on pages 22, 24, 26 and 28 through 37, present fairly the financial position of International Business Machines Corporation and its subsidiary companies at December 31, 1981 and 1980, and the results of their operations and changes in funds for the years 1981, 1980 and 1979, in conformity with generally accepted accounting principles consistently applied. Also, in our opinion, the Five-Year Comparison of Selected Financial Data for 1977 through 1981 presents fairly the financial information included therein. Our examinations of these statements were made in accordance with generally accepted auditing standards and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

Price Waterlause

January 26, 1982 Price Waterhouse New York, N. Y.

		1981	1980	
		(Dolla	rs in millions except per share amo	unts)
Gross Income:	Sales	\$ 12,901	\$ 10,919	\$ 9,473
	Rentals	10,839	10,869	10,069
	Services	5,330	4,425	3,321
		\$ <b>29,</b> 070	\$ 26,213	\$
	Cost of sales.	5,321	4,197	3,267
	Cost of rentals	4,152	3,771	3,491
	Cost of services	2,543	2,181	1,655
	Selling, development and engineering, and			
	general and administrative expenses	11,027	10,324	9,205
	Interest expense	407	273	141
		23,450	20,746	
		5,620	5,467	
	Other income, principally interest	368	430	
	Earnings before income taxes	5,988	5,897	
	Provision for U.S. Federal and	3.7	3. 7.	
	non-U.S. income taxes	2,680	2,335	
Net Earnings		\$_3,308	\$ 3,562	\$
	Per share	<b>\$</b> 5.63	\$ 6.10	
	Average number of shares outstanding:			
	1981-587,803,373			
	1980-583,516,764			
	1979-583,373,269	·		
	,			
			,	
		i		
T1	through 36 are an integral part of this statement.			

## Management Discussion

## Results of Operations

Advances in technology continued at a rapid pace, resulting in the delivery to users of greater productivity at lower cost. This trend has led to substantial expansion of the customer base, with many new users finding utility in IBM information processing products. High levels of orders and product shipments, and expanding services continued worldwide in 1981 in spite of a general downturn in the economy.

Total gross income increased 10.9% over 1980. Gross income from U.S. operations was \$15,088 million, an increase of 21.4% over 1980. Gross income from non-U.S. operations amounted to \$13,982 million. This increase of only 1.4% resulted principally from the effects of the strengthening U.S. dollar. Net earnings before income taxes increased 1.5% over 1980. After providing for income taxes, net earnings for the year were down \$254 million from 1980, a decrease of 7.1%.

Sales of data processing equipment were \$9,449 million, an increase of 23.9% over 1980. Although there were substantial new rental machine installations during the year, as well as selective price increases, worldwide data processing rental income remained flat. U. S. data processing equipment rentals increased by 12.6%, while non-U. S. rentals showed a period-toperiod decline. The high level of sales of installed rental equipment in recent periods and the translation effect of a stronger U. S. dollar held down rental income growth. Gross income from maintenance, program products, and other support services continued strong throughout the business, showing an increase of 20.4% over 1980.

Gross income and earnings from office products reflected the general weakness in the economy, as well as the shift of word processing workload from stand-alone products to new higher-function products and systems.

The rapid fall of major foreign currencies against the U.S. dollar in late 1980 and in 1981 was unprecedented in recent times (graphs illustrating these relationships appear on page 31). While a strong dollar may benefit the United States economy in many ways, the abruptness and magnitude of these currency changes had an adverse effect on IBM's consolidated financial results. Had currency rates remained constant year-to-year, and if the effects of currency rate changes on business volumes, pricing and other operating decisions were disregarded, it is estimated that consolidated gross income for 1981 would have been over \$2 billion greater, and net earnings over \$600 million greater.

Gross profit margins on both sales and rentals have been eroded by high front-end costs of new products, changing product mix, and major expenditures for productive capacity. In addition, the strong surge in U.S. currency has significantly affected period-to-period margin comparisons. For example, non-U.S. gross income from rentals was adversely affected by the current exchange rates, but with no favorable impact on depreciation costs which are translated at historical exchange rates. Overall margins have also been impacted by the faster growth of lower margin service activities, such as maintenance and support services. The margins on these services are improving.

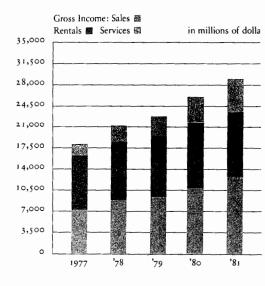
The strengthened U.S. dollar had a beneficial effect on selling, development, engineering and general and administrative expense by reducing the non-U.S. component of these expenses when translated into dollars.

The company recorded exchange gains in 1981 of \$94 million. These gains resulted primarily from the translation of assets and liabilities recorded or denominated in currencies other than the U.S. dollar. This compares with an exchange gain of \$24 million for 1980. Such gains are principally unrealized.

The consolidated effective income tax rate in 1981 was 44.8%, compared to 39.6% in 1980. The variance reflects higher effective tax rates on non-U.S. earnings which resulted primarily from the impact of currency translation, and from adjustments made in 1980 for prior period tax liabilities. The 1981 effective tax rate is more in line with rates in recent years preceding 1980.

The company's goals are to continue to be the high-quality, low-cost producer; to accelerate real growth and achieve greater financial returns. Through substantial investments in research and development, in high-technology manufacturing processes and equipment, and through effective cost and expense controls, IBM intends to achieve these objectives and continue to offer ne products to our customers at lower cost for similar or improved function. New methods of marketing and maintenance have been initiated. Quality programs are expected to yield significant cost savings from more reliable products that require less service support.

The substantial investment in additional capacity and the development of new channels o distribution, have positioned the company to more efficiently supply the requirements of its rapidly growing customer base. Economic uncertainty will likely persist. Sharp changes in foreigr currency rates may again have short-term effects. But the increasing demand for IBM products and services, and the productivity they deliver, should assure a long-range trend of steady and sustained real growth in business volumes and financial performance.



# International Business Machines Corporation and Subsidiary Companies

# Consolidated Statement of Fin: Position at December 31:

		1981	
A		(Dollars	in millions)
Assets			
Current Assets:	Cash	\$ 454 1,575	\$ 281 1,831
	1981, \$187; 1980, \$195	4,382 410	4,562 315
	Inventories	2,805 677	2,293 643
124 12		\$ 10,303	
Rental Machines and Parts	Less: Accumulated depreciation	7,651	15,352 6,969
Plant and Other Property.		9,590 12,895	11,018
I lant and Coner are pros.,	Less: Accumulated depreciation	5,207	4,384
Deferred Charges and Oth	ner Assets	7,688 2,005	<u></u>
		\$ 29,586	
Liabilities and Stoc			
Current Liabilities:	Taxes	\$ 2,412	\$ 2,369
	Loans payable	773	591
	Accounts payable.	872	721
	Compensation and benefits	1,556	1,404
	Other accrued expenses and liabilities.	389 1,318	305 1,136
	Other accrucia expenses and machines.	\$ 7,320	
Deferred Investment Tax (	Credits	252	
	ndemnities and Retirement Plans	1,184	
•		2,669	
Stockholders' Equity:	Capital stock, par value \$1.25 per share	4,389	3,992
	Issued: 1981-592,293,624; 1980-584,262,074 Retained earnings	13,772	12,491
	_	18,161	16,483
	Less: Treasury stock, at cost		30
		18,161	
		\$ 29,586	
The notes on pages 29 thro	ough 36 are an integral part of this statement.		

## Management Discussion

#### Financial Condition

The company has increased its investment substantially over the past several years to take advantage of expanding market opportunities. In the last three years, IBM's investments in capital assets and research and development have totalled \$2.4 billion. Capital expenditures in 1981 amounted to \$6.8 billion, of which one-third was invested in plant and equipment, with the remainder in rental machines. In addition, the company invested \$1.6 billion in research and development in 1981.

Although funds for IBM's expansion continue to be generated principally from operations, the investment in rental machines, plant and equipment, and inventory required additional external sources of capital during 1981. Management initiated a variety of actions to maintain a strong capital structure while obtaining funds at relatively low cost. New long-term borrowings consisted primarily of \$360 million of Eurodollar notes and a \$168 million Swiss franc loan. The company established the IBM Credit Corporation as a wholly owned subsidiary to finance customer installment payment agreements; it raised funds through the employee stock purchase plan by using authorized unissued stock and discontinuing the purchase of treasury shares; it entered into agreements with several companies to purchase their unutilized tax credits and related deductions under the provisions of the Economic Recovery Tax Act of 1981; and it negotiated currency swap agreements with the World Bank, which effectively eliminated the foreign exchange risk associated with the \$254 million German nark and \$112 million Swiss franc loans under-:aken in 1980.

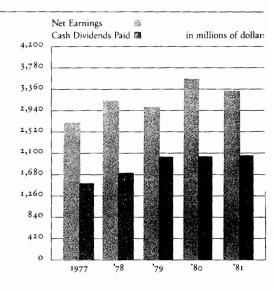
Despite periodic shortages of capital, high inerest rates, and dramatic shifts in currency exhange rates, IBM has been able to utilize its high credit rating and acquire appropriate levels of inancing through worldwide sources. IBM has requently borrowed in currencies other than the U.S. dollar. While there are risks associated with foreign currency obligations, there are also clear advantages. Interest rates are often much lower than comparable dollar loans, and the exchange loss risk associated with repayment is minimized by the availability of foreign source income in most major countries. Consequently, the company has considerable financing flexibility in many different currencies throughout the world. In addition, IBM has approximately \$3.2 billion of unused lines of credit, mostly short-term.

Mindful of the high cost of borrowing and the long lead-time before technological investments yield payback, management has placed increased emphasis on the effective employment of assets. Internal measurements on managerial performance emphasize return on invested capital, inventory turnover, cash flow, payback and other indices of asset management.

Large capital investments are expected to exert pressure on operational cash flow. The ability to assess the resulting funding requirements is complicated by uncertain economic conditions, particularly inflation, volatile interest rates, and foreign currency fluctuations. In addition, cash flows are substantially affected by the customer's largely unpredictable decision to purchase or lease equipment. In this environment, the company's ability to generate or obtain cash on a timely basis is of primary importance. IBM's strong balance sheet position and high credit rating allow management to consider a full range of financing options for future capital needs. The choices will ultimately depend upon the prevailing financial market and economic conditions.

To set forth cash flow information more clearly, IBM's financial statements now include a Statement of Funds Flow, which replaces the Statement of Changes in Financial Position. Years 1980 and 1979 have also been restated. The Statement of Funds Flow depicts the sources of cash and cash equivalents, how they were used, and how much remains available.

Management feels certain that growth prospects for IBM's business will remain strong. National policies regarding tax relief, capital formation, and deregulation are likely to have substantial positive effects on industry in general. Internal and external forecasts point to continuing high demand for information products, and IBM is confident that it has the resources and the people to meet the challenges of the changing marketplace.

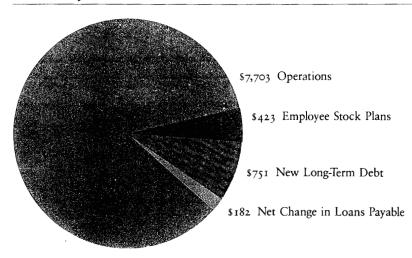


# International Business Machines Corporation and Subsidiary Companies

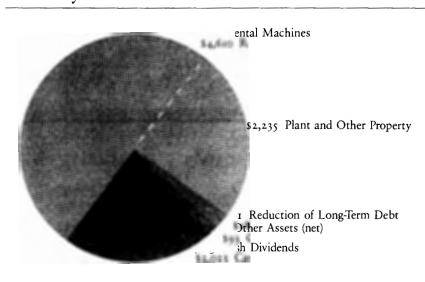
Consolidated Statement of Funds F for the year ended December 31:

		1981		1980	
			(Dollars in m	illions)	
Funds (Cash and Marketable Securities) at January 1		\$ 2,112		\$ 3,771	
Provided from Operations:					
Sources:					
Net earnings	\$ 3,308		\$ 3,562	1	\$ 3,011
Depreciation charged to costs					
and expenses	2,899		2,362		1,970
Depreciation of manufacturing facilities capitalized in					
rental machines	430		397		351
Net book value of rental machines	× 2.5.5		* 000	1	770
and other property retired or sold Other	1,255 (x80)		1,009	ł	779
Other	(189)		90	j	$\frac{353}{6,464}$
17.	7,703		7,420		0,404
Uses:  Investment in rental machines	. 6.0				4 2 7 2
Investment in plant and other property	4,610		4,334	i	4,212
investment in plant and other property	$\frac{2,235}{6,845}$		$\frac{2,258}{6,592}$		1,779 5,991
Increase in deferred charges and	0,043		0,,,92		3,331
other assets	244		275		338
Net change in working capital			, ,	}	
(excluding cash, marketable securities,					
loans payable and dividend payable)	(151)		310	1	343
	6,938		7,177		6,672
Net provided from operations		765		243	
Provided from External Financing:					
Net change in long-term debt	570		510	1	1,304
Net change in loans payable	182		(342)		691
Net provided from external financing		752		168	
Provided from (used for) Employee Stock Plans		423		(62) 4,120	
Less: Cash Dividends Paid		2,023		2,008	
				2,000	
Funds (Cash and Marketable Securities) at December 31		\$ 2,029		\$ 2,112	\$
The notes on pages 29 through 36 are an integral part of this statement.					

## Summary of Sources of Funds (in millions)



## Summary of Uses of Funds (in millions)



## Capital Expenditures

During 1981, IBM's growing business, together with the company's need to replace obso lete equipment, required a worldwide investment of \$6,845 million, including \$4,610 million for rental machines.

Retirements, covering obsolete and dismantled equipment, as well as rental machines sold that previously were under lease to customers, amounted to \$3,079 million in 1981, including \$2,721 million of rental machines. These retirements were charged against amounts provided out of prior and current years' earnings, or against cost of sales.

The major IBM facilities that were completed or under construction throughout the world in 1981 are listed below.

Completed	Purpose	Sq. Ft. (in thousands)
†Rochester, Minnesota	Mfg. & Dev.	699
+ Burlington, Vermont	Mfg. & Dev.	482
+ Boeblingen, Germany	Mfg.	457
† Austin, Texas	Mfg. & Dev.	410'
† Vimercate, Italy	Mfg.	342
Santa Palomba, Italy	Mfg.	303
†Raleigh, North Carolina	Mfg. & Dev.	287
† Manassas, Virginia	Mfg. & Dev.	247
† Mainz, Germany	Mfg.	232
† Endicott, New York	Mfg.	224
† Boca Raton, Florida	Mfg. & Dev.	202
† Essonnes, France	Mfg.	167
Charlotte, North Carolina	Mfg. & Dev.	158
†Hannover, Germany	Mfg.	153
† Yasu, Japan	Mfg.	150
Under Construction		
New York, New York	Mktg.	1031
†San Jose, California	Mfg. & Dev.	926
†Charlotte, North Carolina	Mfg. & Dev.	714
Kawasaki, Japan	Mktg.	440
† Manassas, Virginia	Mfg. & Dev.	425
Milan, Italy	Distr. Center	424
† Portsmouth, England	Adm.	365
Buenos Aires, Argentina	Mktg.	347
St. Louis, Missouri	Mktg.	308
London, England	Mktg.	300
† Toronto, Canada	Mfg.	277
Stuttgart, Germany	Adm. & Mkt	
+Greenock, Scotland	Mfg.	266
Herrenberg, Germany	Mktg.	225
† Jarfalla, Sweden	Mfg.	219
†Boca Raton, Florida	Mfg.	188
+ Austin, Texas	Mfg. & Dev.	186
†Burlington, Vermont	Mfg. & Dev.	
†Endicott, New York	Mfg. & Dev.	145 116
	/5.	
† Additions to existing facilities.		

<sup>\*</sup>Excludes square footage completed in years 1979 and/or 1980.

# International Business Machines Corporation and Subsidiary Companies

# Consolidated Statement of Stockholders'. for the year ended December 31:

		Capital Stock	Retained Earnings	Treasury Stock	
			(Dollars in	millions)	
1979	Stockholders' Equity, January 1, 1979  Net earnings	\$ 3,942	\$ 9,576 3,011 (1,506)	\$ (24)	
	(391,300 shares) Purchases (6,357,500 shares) and sales (6,319,289 shares) of treasury stock under employee plan-net	2.4	(69)	(1)	
	Tax reductions applicable to stock related to employee plans	3,974	11,012	(25)	
1980	Net earnings		3,562		
	Cash dividends declared	16	(2,008)		
	(7,597,773 shares) of treasury stock under employee plan-net	2	(75)	(5)	
	Stockholders' Equity, December 31, 1980	3,992	12,491	(30)	
1981	Net earnings	394	3,308 (2,023)		
	employee plan	3	(4)	30	
	Stockholders' Equity, December 31, 1981	\$ 4,389	\$ 13,772	\$	
The notes on pages 29	through 36 are an integral part of this statement.				

## International Business Machines Corporation and Subsidiary Companies

## Notes to Consolidated Financial Statements:

## Significant Accounting Policies

## Principles of Consolidation:

The consolidated financial statements include the accounts of International Business Machines Corporation and its U.S. and non-U.S. subsidiary companies, other than IBM Credit Corporation, a wholly owned financing subsidiary. The equity method is used to account for the investment in IBM Credit Corporation and for investments in joint ventures and affiliated companies in which IBM has 50% or less ownership.

## Translation of Non-U.S. Currency Amounts:

Assets and liabilities denominated in currencies other than U.S. dollars are translated to U.S. dollars at year-end exchange rates, except that inventories and plant, rental machines and other property are translated at approximate rates prevailing when acquired. Income and expense items are translated at average rates of exchange prevailing during the year, except that inventories charged to cost of sales and depreciation are translated at historical rates. Exchange gains and losses are included in earnings currently.

#### Gross Income:

Gross income is recognized from sales when the product is shipped or in certain cases upon customer acceptance, from rentals in the month in which they accrue, and from services over the contractual period or as the services are performed. Rental plans include maintenance service and contain discontinuance and purchase option provisions. Rental terms are predominantly monthly or for a two-year period, with some covering periods up to five years.

#### Depreciation:

Rental machines, plant and other property are carried at cost and depreciated over their estimated useful lives. Depreciation of rental machines is computed using the sum-of-the-years digits method. Depreciation of plant and other property is computed using either accelerated methods or the straight-line method.

#### Retirement Plans:

Current service costs are accrued currently. Prior service costs resulting from improvements in the plans are amortized generally over 10 years.

## Selling Expenses:

Selling expenses are charged against income as they are incurred.

## Income Taxes:

Income tax expense is based on reported earnings before income taxes. It thus includes the effects of timing differences between reported and taxable earnings that arise because certain transactions are included in taxable earnings in other years. Investment tax credits are deferred and amortized as a reduction of income tax expense over the average useful life of the applicable classes of property. Purchased tax credits and deductions are offset against the purchase cost.

### Inventories:

Raw materials, operating supplies, finished goods and work in process applicable to equipment sales are included in inventories at the lower of average cost or market. Work in process applicable to equipment rentals is similarly valued and included in rental machines and parts.

			(Dollars in millions)	
At end of year:	Net assets employed			
	Current assets	\$ 5,430	\$ 5,547	\$
	Current liabilities	4,102	3,911	_
	Working capital	1,328	1,636	
	Plant, rental machines and other property, net	7,633	6,823	
	Deferred charges and other assets	894	971	_
		9,855	9,430	_
	Reserves for employees' indemnities and retirement plans	1,184	1,443	
	Long-term debt	496	437	
		1,680	1,880	-
	Net assets employed	\$ 8,175	\$ 7,550	\$
	Number of employees	149,794	146,973	:
For the year:	Gross income from sales, rentals and services	\$13,982	\$ 13,787	\$
	Earnings before income taxes	\$ 2,392	\$ 2,946	\$
	Provision for U.S. Federal and non-U.S. income taxes	1,153	1,044†	
	Net earnings	\$ <u>1,239</u>	\$	\$
	Capital expenditures	\$3,274	\$3,367	\$
	† See Taxes on page 32.			

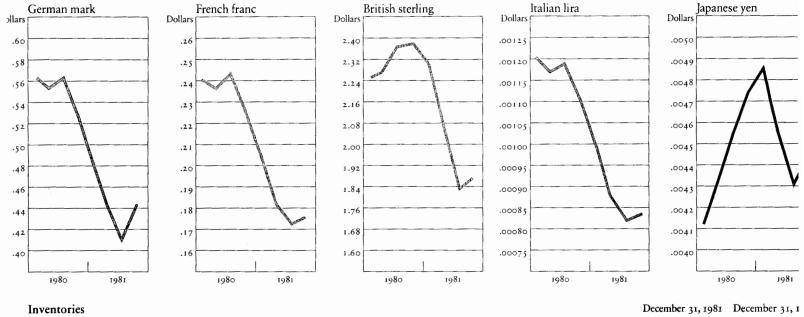
Shipments of data processing equipment in non-U.S. operations continued at high levels and strong growth rates in 1981. Despite this strong performance, non-U.S. financial results were affected even more than U.S. operations by inflation and other factors. Adding to these conditions was the severe impact of the stronger U.S. dollar. The Management Discussion on

page 23 refers to this effect in greater detail. The graphs on the following page further illustrate the decline in value, in relation to the dollar, of the five major foreign currencies in which IBM conducts most of its non-U.S. business.

Undistributed earnings of non-U.S. subsidiaries included in consolidated retained earnings amounted to \$6,428 million at December 31, 1981,

\$6,108 million at December 31, 1980, and million at December 31, 1979. These earn are indefinitely reinvested in non-U.S. ope Accordingly, no provision has been made taxes that might be payable upon remitta such earnings.

## Foreign Currency Valued in U.S. Dollars



mventories		December 31, 1901	December 31, 1
		(Dollar	s in millions)
	Finished goods	\$ 547	\$ 4
	Work in process	1,999	1,:
	Raw materials and operating supplies	259	
	Total	\$ 2,805	\$_2,2

## Rental Machines and Parts

Rental machines and parts are comprised of capitalized machines, rental machine work in process and field service parts. Rental machines include machines installed with IBM in the

amount of \$2,318 million and \$1,886 million at December 31, 1981 and 1980, respectively, with accumulated depreciation of \$1,696 million and \$1,396 million. Rental machine work in

process and field service parts totaled \$3,806 million and \$3,595 million at December 31, 198 and 1980.

Plant and Other Property		December 31, 1981	December 31, 1
		(Dollar	rs in millions)
	Land and land improvements		\$ 6
1	Buildings	5,123	4,3
1	Factory, laboratory and office equipment	7,119	6,0
		12,895	11,0
]	Less: Accumulated depreciation	5,207	4,5
•	Total	\$ 7,688	\$ 6,6

		(Dollars in millions)
Earnings before U.S. Federal and non-U.S. income taxes:		
U.S. operations	\$ 3,596	\$ 2,951
Non-U.S. operations	2,392	2,946
	\$ 5,988	\$ 5,897
Provision for U.S. Federal and non-U.S. income taxes:		
U.S. operations	\$ 1,527	\$ 1,291
Non-U. S. operations.	1,153	1,044
	2,680	2,335
Real estate, personal property, state and local franchise (including		
state income taxes of \$200 million in 1981, \$138 million in 1980,		
and \$127 million in 1979), social security and other taxes	1,587	1,480
Total	\$ <u>4,267</u>	\$ 3,815
The components of the provision for U.S. Federal		
and non-U.S. income taxes are as follows:		
U.S.:		
Current	\$ 994	\$ 776
Net tax effects of timing differences	49	(34)
Net deferred investment tax credits	70	42
	1,113	784
Non-U. S. :		
Current	1,464	1,546
Net tax effects of timing differences	103	5
m. i	1,567	1,551
Total provision	\$ 2,680	$\frac{2,335}{}$

The consolidated effective U.S. Federal and non-U.S. income tax rate was 44.8% in 1981, 39.6% in 1980 and 45.8% in 1979. In 1980, the lower effective tax rate on earnings of non-U.S. operations accounts for 5.3 percentage points

of the difference between the effective rate and the U.S. statutory rate of 46.0%.

The consolidated tax provision for 1980 includes the effect of a reduction of prior periods income tax liabilities of \$224 million (38¢ per

share), resulting from changes in tax laws other adjustments of prior years income to expenses. Of this amount, \$207 million non-U.S. operations.

	(Dollars in	millions)
U.S. Operations:		
9½% notes due 1986	\$ 500	\$ 50
93/8% debentures due 2004 (with sinking fund		
payments 1985-2003)	500	50
10.80% notes due 1983-1986	300	30
Other (average interest rate at December 31, 1981,		
in parentheses) payable in:		
U.S. dollars, due 1984-2001 (13.2 %)	416	-
Swiss francs, due 1986-1987 (6.4%)	262	13
German marks, due 1985-1988 (10.1%)	199	2 5
	2,177	1,66
Non-U.S. Operations:		
Various obligations (average interest rate		
at December 31, 1981, in parentheses) payable in:		
U.S. dollars, due 1983-1992 (14.5%)	182	15
French francs, due 1983-1991 (12.4%)	170	17
Other currencies, due 1983-2011 (16.8%)	144	10
	496	43
	2,673	2,10
Less: Unamortized discount, related principally		
to the 9½% notes and 9¾% debentures	4	
Total	\$ 2,669	\$ 2,05

Annual maturity and sinking fund requirements in millions of dollars on long-term debt outstanding at December 31, 1981, are follows: 1983, \$158; 1984, \$289; 1985, \$290; 1986, \$928; 1987, \$269; 1988 and beyond, \$739.

#### Interest Cost

Interest on borrowings amounted to \$480 million in 1981, \$325 million in 1980 and \$141 million in 1979. Of these amounts, \$73 million in 1981 and \$52 million in 1980 were included in the cost of buildings under construction, resulting in a net earnings increase of \$39 million and \$31 million, respectively. Prior to 1980, all interest was charged against income as incurred.

### Lines of Credit

At December 31, 1981, the company had unused lines of credit available with a number of U.S. banks. These lines of credit permit the company to borrow up to an aggregate of \$2,000 million outstanding at any time, at interest rates not to exceed the banks' prime rate. Included in these lines of credit is \$1,875 million, which is shared with the IBM Credit Corporation. In addition, a number of non-U.S. subsidiaries had available unused lines of credit of approximately \$1,200 million. Interest rates on borrowings would vary from country to country depending on local market conditions. About \$160 million of such unused lines require the

payment of commitment fees, which generally range from 1/4% to 1/2%.

## IBM Credit Corporation

IBM Credit Corporation, a wholly owned unconsolidated subsidiary, finances installment payment agreements relating to sales by IBM of its products in the United States. Its operations commenced as of May 1, 1981. IBM's investment in the IBM Credit Corporation is accounted for by the equity method, and IBM Credit Corporation earnings are included in other income in IBM's consolidated statement of earnings. IBM has agreed to cause the IBM Credit Corporation to have a positive net worth at all times. IBM Credit Corporation has \$205 million of lines of credit available, in addition to those shared with the IBM Corporation.

The following information has been summarized from the financial statements of the IBM Credit Corporation. Additional information is available in its 1981 Annual Report. Copies may be obtained by writing to: IBM Credit Corporation, 1200 High Ridge Road, Stamford, Connecticut 06904.

## Earnings for the period May 1, 1981 to December 31, 19

	(D	oll	ars	in t	housand
Finance and other income				\$	49,21
Expenses					34,27
Provision for income taxes	٠.			_	5,07
Net earnings				\$	9,86
Financial position at December 31, 1	98	I			

Net earnings	\$ 	9,86
Financial position at December 31, 1981		
Assets:		
Cash and cash equivalents	\$	53
Installment payment agreement		
receivables-net	68	89,55
Deferred charges and other assets	_	1,62
Total Assets	\$ 69	91,72
Liabilities and Stockholder's Equity:		
Commercial paper	\$ 31	18,42
D		

Commercial paper	\$ 318,42
Due to IBM Corporation	97,16
Taxes and other accruals	9,03
Long-term debt	162,23
Stockholder's equity	104,86
Total Liabilities and	

Stockholder's Equity . . . . . . . . .

## Research and Development

Research and development expenses amounted to \$1,612 million in 1981, \$1,520 million in 1980 and \$1,360 million in 1979.

#### Retirement Plans

The company and its U.S. subsidiaries have trusteed, noncontributory retirement plans, for which accrued costs are funded, covering substantially all regular and part-time employees. At December 31, 1981, there were 13,538 individuals receiving benefits under the plans. Most subsidiaries outside the United States have retirement plans under which funds are deposited with trustees, annuities are purchased under group contracts, or reserves are provided.

The cost of all plans for 1981, 1980 and 1979 was \$1,060 million, \$1,109 million and \$971 million respectively. Unfunded or unaccrued prior service costs under all plans amounted to \$516 million at December 31, 1981, and \$821 million at December 31, 1980. Updating of the actuarial assumptions, including the assumed investment rate of return, used to value the U.S. retirement plans had the effect of reducing unfunded prior service costs in 1981 by approximately \$185 million. However, the effect of such changes on the pension cost for 1981 was not material.

The following table compares estimated benefits and net assets for U.S. retirement plans calculated as prescribed by the Financial Accounting Standards Board. The assumed rate of return used in determining the actuarial present value of accumulated benefits was 5½ percent for 1981 and 4¾ percent for 1980.

At December 31	1981	1980
	(Dollars i	
Actuarial present value of accumulated benefits:  Vested	\$ 5,158 232	\$ 5,166 168
Net assets available for benefits	\$ <u>5,390</u> \$ <u>6,155</u>	\$ <u>5,334</u> \$ <u>5,712</u>

At December 31, 1981 and at December 31, 1980 the market value of fund assets and reserves of non-U.S. plans exceeded or approximated the present value of vested benefits computed in the usual actuarial manner.

#### Stock Purchase Plan

In April, 1981, stockholders approved a new five-year Employees Stock Purchase Plan, effective July 1, 1981, which authorizes up to 40 million shares of capital stock for the Plan. Employees who are not participants in a stock option plan may purchase IBM's capital stock through payroll deductions of up to 10% of their compensation. The price an employee pays for a share of stock is 85% of the average market price on the date the employee has accumulated enough money to buy a share.

Under the 1981 Plan and its predecessor 1976 Plan, employees purchased 8,284,857 shares during the year, including 455,242 treasury shares, for which \$408 million was paid to IBM. At December 31, 1981, 35,839,693 reserved unissued shares remain available for purchase under the 1981 Employees Stock Purchase Plan.

#### Stock Option Plans

The stock option plans provide for granting officers and other key employees options to purchase IBM's capital stock at 100% of the market price on the day of grant. Options have a maximum duration of 10 years and may be exercised in four annual installments, commencing one year from date of grant.

The following table summarizes stock option transactions during 1981:

	Number of Shares		
	Under Option	Available for Option	
Balance at			
January 1, 1981	12,942,483	2,327,095	
Options granted	2,377,223	(2,377,223	
Options terminated	(339,446)	160,944	
Options exercised	(95,251)	_	
Balance at			
December 31, 1981	14,885,009	110,816	
Exercisable at			
December 31, 1981	10,284,165		

IBM received \$5.2 million for the 95,251 shares purchased during 1981. The 14,885,009 shares under option at December 31, 1981, are at option prices ranging from \$41.60 to \$85.40 per share.

#### Litigation

In January, 1982, the Department or agreed to a dismissal of the civil antitrus it had commenced against IBM in 1969.

In December, 1980, the Commission European Communities filed a "statemer objections" seeking modification of certs business practices in the Common Markarea. The Commission may also seek to if fines. Most of the practices to which the Commission has objected have been held legitimate competition in the United Stat IBM has denied the charges in this process is defending its position.

## Geographic Area and Industry Segment Information

Financial information by geographic area and industry segment for the years 1981, 1980 and 1979 is summarized below to provide a better

understanding of IBM's operations. Material interdependencies and overlaps exist among IBM's operating units and, therefore, the information may not be indicative of the financial results of, or investments in, the reported areas and segments were they independent organizations.

Geographic Areas	1981	1980	197
		(Dollars in millions)	
United States			
Gross income-Customers	\$ 15,088	\$ 12,426	\$ 10,61
Interarea transfers	1,857	1,615	1,10
Total	\$ 16,945	\$ 14,041	\$ 11,72
Net earnings	2,094	1,725	1,61
Assets at December 31	16,022	13,737	12,63
Europe/Middle East/Africa			
Gross income-Customers	\$ 9,312	\$ 9,932	\$ 8,83
Interarea transfers	383	491	53
Total	\$ 9,695	\$ 10,423	\$ 9,361
Net earnings	758	1,511	1,08:
Assets at December 31	9,499	9,573	8,98;
Americas/Far East			
Gross income-Customers	\$ 4,670	\$ 3,855	\$ 3,407
Interarea transfers	659	450	410
Total	\$ 5,329	\$ 4,305	\$ 3,817
Net earnings	470	398	355
Assets at December 31	4,650	3,975	3,358
Eliminations			
Gross income	\$ (2,899)	\$ (2,556)	\$ (2,042
Net earnings	(14)	(72)	(38
Assets	(585)	(582)	(446
Consolidated			
Gross income	\$ 29,070	\$ 26,213	\$ 22,863
Net earnings	\$ 3,308	\$ 3.562	\$ 3,011
Assets at December 31	\$ 29,586	\$ 16.702	
Time to the December 31	29,500	\$ 26,703	\$ 24,530

In the Europe/Middle East/Africa area, European operations accounted for approximately 95% of gross income in 1981, 1980 and 1979.

Net earnings in 1980 include the effect of a reduction of prior periods tax liabilities of \$17 million in the United States, \$187 million

in Europe/Middle East/Africa, and \$20 million in Americas/Far East.

Interarea transfers, consisting principally of completed machines, sub-assemblies and parts, are priced at cost plus an appropriate service charge, applied consistently throughout the world. The cost and service charges that relate to asset transfers are capitalized and depreciated or amortized by the importing area. Interarea accounts receivable, the unamortized portion of service charges, and the net change during the year in unamortized service charges, have been eliminated in consolidation.

		(Dollars in millions)	
Information-Handling Business:			
Data Processing		5-10/7	•
Gross income—Customers.	\$ 24,073	\$21,367	\$
Operating income.	5,832	5,330	
Assets at December 31	23,846	21,088	
Depreciation expense	2,576	2,061	
Capital expenditures	6,094	6,027	
Office Products			
Gross income—Customers	4,219	4,135	
Operating income	263	479	
Assets at December 31	3,495	3,377	
Depreciation expense	306	287	
Capital expenditures	714	537	
Federal Systems			
Gross incomeCustomers	719	647	
Operating income.	56	37	
Assets at December 31	436	371	
Depreciation expense.	16	13	
Capital expenditures	37	27	
Other Business			
Gross income—Customers	50	64	
Operating income	59		
	1	3	
Assets at December 31	32	36	
Depreciation expense	I	I	
Capital expenditures	_	1	
Consolidated			
Gross income-Customers	\$ 29,070	\$26,213	\$ 2
Operating income	\$ 6,153	\$ 5,849	\$ <u></u>
General corporate and interest expense	(533)	(382)	
Other income, principally interest	368	430	
Earnings before income taxes	\$ 5,988	\$ 5,897	\$
Assets identified to segments	\$ 27,809	\$24,872	= \$ 2
Assets not identified to segments, including marketable securities	, , ,	1,831	Ψ-
Total assets at December 31	\$ 29,586	\$26,703	\$ <u>2</u>
			=
Depreciation expense.	\$ 2,899	\$ 2,362	\$ <sub>=</sub>
Capital expenditures	\$ 6,845	\$ 6,592	\$

IBM's operations, with very minor exceptions, are in the field of information-handling systems, equipment and services. However, for purposes of segment reporting, IBM's information-handling business has been reported as three segments:

Data Processing—consists of informationhandling products and services such as data processing machines and systems, computer programming, systems engineering, education and related services and supplies for commercial and government customers.

Office Products—consists of informationhandling products, systems and services such as electric and electronic typewriters, magnetic media typewriters and systems, information processors, document printers, copiers, and related supplies and services for commercial and government customers. Federal Systems—consists of specialized information-handling products and services for United States space, defense and other agencies in some instances, other customers.

Other Business consists of educational, t and testing materials and services for school, and industrial use.

Intersegment transfers of products and similar to those offered to unaffiliated custom not material.

Gross Income	by	Segment ††
--------------	----	------------

1981

1980

197:

		(Dollars in millions)	
Data Processing segment:  Equipment  Sales	\$ 9,449 9,660 19,109	\$ 7,627 9,591 17,218	\$ 6,33 8,840 15,18
Maintenance contracts, program products, parts and supplies			
Sales	458	411	38
Rentals	24	2.5	2.
Services	4,482	3,713	2,74
	4,964	4,149	18,33
	24,073	21,367	18,33
Office Products segment:			
Sales	2,245	2,183	2,08.
Rentals	1,155	1,253	1,19
Services	819	699	561
	4,219	4,135	3,84
All other segments:			
Sales	749	698	66:
Services	29	13	
	778	711	671
Total	\$ 29,070	\$ 26,213	\$ 22,86

<sup>††</sup>This information should be read in conjunction with the Industry Segments notes on pages 35 and 36. Gross income from rentals includes maintenance service on rente equipment. Gross income from services consists of maintenance service on sold equipment, program products and other services.

Five-Year Comp	parison of Selected Financial Da	ata 1981	1980	1979	1978	1977
			(Dollars in r	nillions except per share	amounts)	
For the year:	Gross income from sales,					
	rentals and services	\$ 29,070	\$ 26,213	\$ 22,863	\$ 21,076	\$ 18,13
	Net earnings	3,308	3,562	3,011	3,111	2,719
	Per share †	5.63	6.10	5.16	5.32	4.5
	Cash dividends paid	2,023	2,008	2,008	1,685	1,488
	Per share †	3.44	3.44	3.44	2.88	2.50
	Investment in plant, rental	i				
	machines and other property	6,845	6,592	5,991	4,046	3,39
	Return on stockholders'	l l				
	equity	19.1%	22.7%	21.2%	23.8%	21.4
At end of year:	Total assets	\$ 29,586	\$ 26,703	\$ 24,530	\$ 20,771	\$ 18,978
	Net investment in plant, rental					
	machines and other property	17,278	15,017	12,193	9,302	7,889
	Working capital	2,983	3,399	4,406	4,511	4,864
	Long-term debt	2,669	2,099	1,589	285	256
	Stockholders' equity	18,161	16,453	14,961	13,494	12,618

## Supplemental Financial Information

### Information on Effects of Changing Prices

Sustained high inflation has eroded industry's ability to fund the replacement and expansion of productive capacity. Under conventional accounting principles, financial statements are prepared on the basis of historical costs, i.e. the actual dollars exchanged at the time of the transaction. Financial statements prepared in this manner, however, do not adequately reflect the decline in the purchasing power of those dollars and the subsequent effect on cash flows required for future replacement of capital assets.

In an attempt to measure the effects of in-

flation, the Financial Accounting Standards Board prescribed two methods for experimentation. The Current Cost Method uses estimated changes in specific prices to restate the value of inventories, rental machines, plants and other property. Such estimates are based upon latest production costs, published price indices, current suppliers' prices, and appraised valuations, and represent year-end costs, or costs in effect at date of sale, to attain the same functional service potential as embodied in the company's existing assets. The Constant Dollar Method restates these assets, both U.S. and non-

U.S., simply by factoring the increase in t of general inflation, as measured by the U Consumer Price Index for all Urban Cons (CPI-U).

The Current Cost Method better me the impact of inflation on IBM because it the positive effects of technological and o ductivity improvements. It also recognizes changes in vendor prices caused by supply demand and other factors which cause the specific prices of IBM's vendor purchases t tuate differently than price changes resulti solely from general inflation.

	As Reported in Financial Statements	Restated in Av	erage 1981 Dollars	
Comparison of Selected Financial Data Adjusted for Changes in Specific Prices (Current Cost)	1981	1981	1980	
	(	Dollars in millions ex	ccept per share amoun	ts)
Gross income from sales, rentals and services	\$ 29,070 12,016 11,066 2,680	\$ 29,070 11,964 11,185 2,680	\$ 28,932 11,449 11,377 2,577	\$ : : :
Net earnings  Earnings per share	\$ <u>3,308</u> \$ <u>5.63</u>	\$ <u>3,241</u> \$ <u>5.51</u>	\$ <u>3,529</u> \$ 6.05	<b>\$</b> _
Stockholders' equity (net assets)  Loss from decline in purchasing power of net monetary assets	\$	\$ <u>19,749</u> \$ 62	\$ <u>20,193</u> \$ <u>301</u>	\$ : = \$
Increase in general price level of inventories, rental machines and plant and other property Increase (decrease) in specific prices (Current Cost)		\$ 1,982 (212)	\$ 2,350	<b>s</b>
Excess of increase in general price level over increase (decrease) in specific prices		\$ 2,194	\$ <u>1,846</u>	\$

Experimentation with the Constant Dollar Method as described above, has proven to have little or no application to IBM's business. Under this method, IBM's 1981 restated earnings would be \$1,899 million and stockholders' equity \$21,694 million.

Using the Current Cost Method the company's 1981 financial results, when adjusted for changing prices, show a decline of \$67 million from reported net earnings and an increase in stockholders' equity of \$1,588 million. The estimated current cost of acquiring existing plants and other property is \$2,239 million greater than the depreciated acquisition costs; the current production costs of rental machines are

\$665 million less, and inventories \$49 million less. The above changes in cost represent the additional cash investment the company would have to expend at current prices to acquire the same service potential of existing assets. The additional depreciation in 1981 on these restated assets would have been \$215 million. Other costs would have been reduced by \$148 million. Therefore, had the company made this added investment, the 1981 earnings would have been \$67 million less.

Productivity improvements from technological advances continued to partially offset inflationary pressures and are reflected in the lower estimated current costs of inventories and rental machines.

In addition, the difference between the amo ported in the financial statements and the re amounts using current costs is significantly influenced by changes in currency exchange. The Current Cost Method prescribes that n inventories, rental machines and plant and o property, as well as the related depreciation and other costs, be translated into U.S. dolla using current exchange rates. In preparing a dated financial statements, the company use historical exchange rates to translate these as and the related depreciation expense and oth costs. The use of different translation measu ments, therefore, has a significant effect on t comparability of data reported in the financial

tatements and the information prepared using urrent costs.

When a company retains monetary assets r liabilities such as cash or debt, gains and losses 1 purchasing power occur during periods of in-

flation. IBM's net monetary asset position resulted in a significantly reduced purchasing power loss in 1981, reflecting increased debt and cash outlays made for productive capacity and rental machines.

Although inflation-adjusted information

is an imprecise estimate, it nevertheless serves to emphasize the debilitating effects of inflation. It points out the importance of bringing inflation under control and the need for further public policy initiatives to encourage capital investment.

## ive-Year Comparison of Selected Financial Data Adjusted for General Inflation (Constant Dollar)

The amounts shown below for the years 977 to 1980 have been converted into the equiv-

alent purchasing power of 1981 dollars by applying to the amounts reported the rate of

changes in the average CPI-U from that year to year 1981.

	1981	1980	1979	1978	1977
		(Dollars in	millions except per sha	are amounts)	
Gross income from sales, rentals and services	\$ 29,070 \$ 3.44	\$ 28,932 \$ 3.80	\$ 28,647 \$ 4.31	\$ 29,381 \$ 4.01	\$ 27,214 \$ 3.75
(at December 31)	\$ 56.88	\$ 74.92	\$ 80.67	\$ 104.04	\$ 102.63
all Urban Consumers (1967=100.0)	272.4	246.8	217.4	195.4	181.5

The actual market price of IBM stock on the New York Stock Exchange composite tape at December 31, for years 1977 to 1981 (adjusted for stock split) was \$68.38, \$74.63, \$64.38, \$67.88 and \$56.88 respectively. † Adjusted for 1979 stock split.

### elected Quarterly Data

	Gross	s Gross	Net	Per Share		Stock Prices	
 1981	Income	Profit	Earnings	Earnings	Dividends	High	Low
		(I	Pollars in millions	except per share	and stock price	es)	
First Quarter	\$ 6,461	\$ 3,900	\$ 730	\$ 1.25	\$ .86	\$ 71.50	\$ 60.25
Second Quarter	6,895	4,047	804	1.37	.86	63.38	55.13
Third Quarter	6,721	3,875	693	1.18	.86	58.88	52.25
Fourth Quarter	8,993	5,232	1,081	1.83	.86	57.63	48.38
Total	\$ 29,070	\$ 17,054	\$ 3,308	\$ 5.63	\$ 3.44		
1980							
First Quarter	\$ 5,748	\$ 3,611	\$ 681	\$1.17	\$ .86	\$72.00	\$51.38
Second Quarter	6,181	3,813	764	1.31	.86	60.38	50.38
Third Quarter	6,479	3,981	884†	1.51†	.86	69.13	58.38
Fourth Quarter	7,805	4,659	1,233†	2.11†	.86	72.75	63.25
Total	\$26,213	\$16,064	\$ 3,562	\$6.10	\$3.44		

<sup>†</sup> Includes the effect, \$70 million (12¢ per share), and \$154 million (26¢ per share) in the third and fourth quarters respectively, of reductions in income tax expense applicable to prior years.

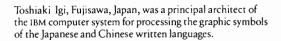
There were 742,162 stockholders of record t December 31, 1981. During 1981, stockholders eceived \$2,023 million in cash dividends. The regular quarterly cash dividend payable

March 10, 1982, will be at the rate of \$.86 per share. This dividend will be IBM's 268th consecutive quarterly cash dividend.

The stock prices reflect the high and low

prices for IBM's capital stock on the New York Stock Exchange composite tape for the last two years.

# More Productive People...

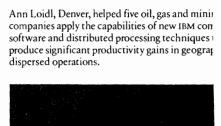


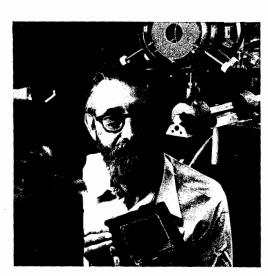


Valerie Cole, Chicago, helped an industrial equipment manufacturer establish a worldwide IBM computer network that links dealerships in 65 countries through more than 2,000 IBM display terminals.

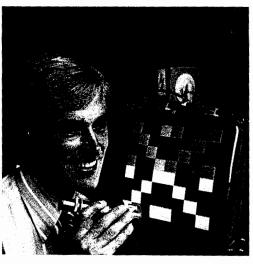


Guenter Knauft, Boeblingen, Germany, made important contributions to the design and quality-testing of the intermediate-scale IBM 4331 computer, which has been installed by thousands of customers in more than 40 countries.





Dr. Janusz Wilczynski, Yorktown Heights, N.Y., designed advanced optics for photolithography, work that has significantly increased the production volumes of very dense packaging used in many IBM computers.



Brian Sowter, Hursley, United Kingdom, was a ke contributor to the inventions which achieved high quality in IBM's color display computer terminals.



## Progress Report...

### :fense and Space Programs

The U.S. Department of Defense has thorized the U.S. Navy to proceed with proction of 19 ship systems and 18 air systems. LAMPS, the Navy's new ship/helicopter system; which IBM is the prime contractor. Designed a defense against submarines and detection surface vessels, LAMPS (Light Airborne Multirpose System) successfully passed a series of en-sea tests in the Atlantic during 1981.
The system contract is expected to be one of the gest IBM has had with the U.S. government.

Computers and programming developed by e Federal Systems Division are playing imretant roles in the current series of orbital flights NASA's Space Shuttle. The spacecraft is conolled by five IBM onboard computers, ogrammed by more than 600,000 IBM inructions. Only one-third the size of previous sollo mission computers, each of the onboard stems has five times more memory and ocesses information 40 times faster. IBM has to provided three large ground computers and ore than three million programming instructures for flight control and pre-launch checkout.

IBM has been awarded a U.S. Navy contract: the IBM Advanced Signal Processor (ASP), a ecial-purpose computer used on surface ships, bmarines and planes, including helicopters. wering the Navy's requirements for five years, e contract calls for delivery of as many as o ASPs with a value exceeding \$300 million. The ASP can perform 20 million multiplications second.

#### tellite Business Systems

The second satellite for the domestic U.S. mmunications system operated by Satellite siness Systems (SBS) is undergoing final tests in ace and will enter commercial service early in 82. SBS is the partnership formed by subliaries of The Aetna Casualty and Surety Comny, COMSAT General Corporation and IBM.

At year-end 1981, SBS had 60 earth stations d 7 customer networks installed, including one 1BM. SBS has opened marketing and field vice centers throughout the U.S. and now has 100 employees. The company plans to launch a 11d satellite on the first commercial payload 13dt of NASA's Space Shuttle in late 1982.

In January, 1982, SBS and the international division of British Telecom announced plans to provide joint transatlantic services, using satellite facilities of the International Telecommunications Satellite Organization (Intelsat). The services would include computer data communication, electronic mail, video teleconferencing and facsimile transmission. British Telecom is the government-owned corporation responsible for all telecommunications services for the United Kingdom. SBS has applied to the U.S. Federal Communications Commission for authority to provide such international common carrier services. Approval would permit SBS customers in the U.S. to interconnect with their subsidiaries and other British Telecom customers in the United Kingdom.

Following FCC approval in 1981, SBS is negotiating with the Canadian government and Canadian common carriers to establish services between Canada and the U.S., using SBS satellites.

#### New IBM Credit Corporation

IBM has established a wholly owned subsidiary, the IBM Credit Corporation, to provide added flexibility in company financing and a more efficient, single-management focus on the financing of installment payment agreements offered by various U.S. marketing divisions.

#### **Expanded Support Programs**

IBM support programs at both the national and community levels have been broadened for 1982. Included are expanded job training for the disadvantaged, a broader program of matching grants to education, hospitals and the arts, as well as additional support for the IBM Fund for Community Service. Participation by husbands and wives of employees was introduced in several areas. IBM will also conduct new training programs for managers of urban service organizations in skills that will help them better manage their scarce resources.

During 1982, IBM will increase from 8 to 19 the number of major data and word processing job training centers for the disadvantaged that the company helps sponsor in the U.S. The centers are in urban areas with high unemployment and are operated in cooperation with nonprofit community-based organizations. IBM lends the computing and office products equipment and personnel needed for effective operation. Since opening their doors in 1968, such centers supported by IBM have graduated more than

5,000 students and placed more than 80% in jobs. The company also helps support more than 200 smaller clerical job training operations.

#### **Equal Opportunity Programs**

Emphasis continued during the year on worldwide IBM programs that provide equal opportunity in employment, training and advancement. Of the more than 17,600 employees hired in the U.S. during the year, 42% were women and 20% were minorities. At year-end, IBM had more than 2,700 women managers in the U.S. There were also over 2,600 minority managers, and of those, about 470 were women.

During the United Nations' International Year of Disabled Persons in 1981, IBM broadened its installation of workplace accommodations for the handicapped. IBM also helped sponsor the International Winter Special Olympics in Vermont for handicapped persons from all 50 states and 16 other nations.

IBM has several thousand handicapped employees worldwide, including a number of managers. The majority have impaired hearing, sight or mobility. Among the workplace accommodations for them are audio typewriters and computer terminals, computer software and printers for Braille translations, keyboard hand and arm rests, motorized wheelchairs, reserved auto parking, modified elevators and rest rooms, ramps and audio cassettes of IBM publications.

During 1981, more than 100 IBM employees were on social service leave in the U.S., working for national or community nonprofit organizations. In addition, more than 40 employees were on college and university campuses, participating in IBM's faculty loan program. Most were serving as teachers at predominantly minority colleges.

In 1981, the company continued to expand countrywide purchasing of products and services from minority businesses—black, Hispanic, American Indian and Asian. The number of minority-owned suppliers in 1981 grew to more than 600 companies doing over \$68 million worth of business with IBM. Also increasing, to over \$24 million, was the value of purchases from more than 300 companies owned primarily by women. IBM did over \$16 million in business with more than 80 suppliers that have predominantly handicapped work forces.

# Progress Report...

The 10-month exhibition of the works of French sculptor Auguste Rodin at the National Gallery of Art in Washington, D.C., through May 2, 1982, is being made possible by a grant from 1BM. Pictured is the bronze casting, "Gates of Hell." More than 350 of Rodin's sculptures in bronze, marble and other media are on exhibit. Total attendance is expected to exceed one million.



#### Personal Computer 'Courseware'

Three software programs for the new IBM Personal Computer developed by SRA, IBM's educational publishing subsidiary, are now available. Suited for home or school use, the "educational courseware" provides computer drill and instruction in arithmetic for students in first and second grades and above. One program provides timed drills to build speed and accuracy—in either a competitive or noncompetitive format. The other two programs are games designed to enrich basic computation and problem-solving skills.

## Suggestion Plan Savings

During 1981, IBM received more than 195,000 cost- and labor-saving ideas from employees through the worldwide IBM Suggestion Plan.

These ideas saved the company over \$60 million through increased productivity and resulted in awards to employees exceeding \$10 million.

#### More Energy Gains

IBM improved its energy efficiency again in 1981 with conservation measures that brought a 4.5% savings per square foot at major U.S. locations, compared with 1980. This reduction brought IBM's total U.S. savings from the 1973 pre-conservation level to 50%.

In the past eight years, IBM has conserved enough electricity in the U.S. to meet the needs of 450,000 homes for a year. Enough fuel oil has been saved to serve 250,000 homes in the northern states.

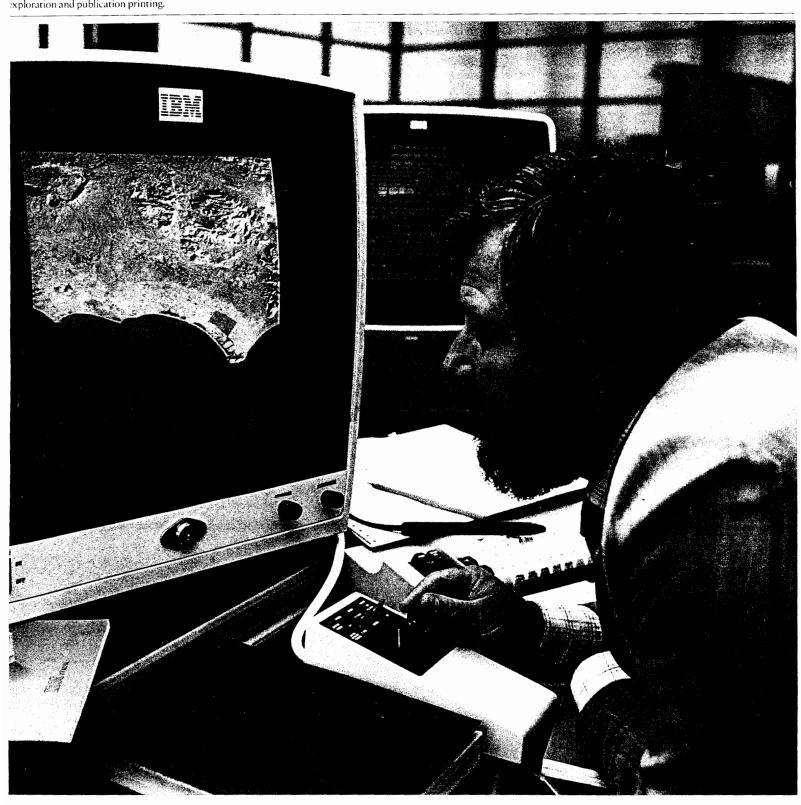
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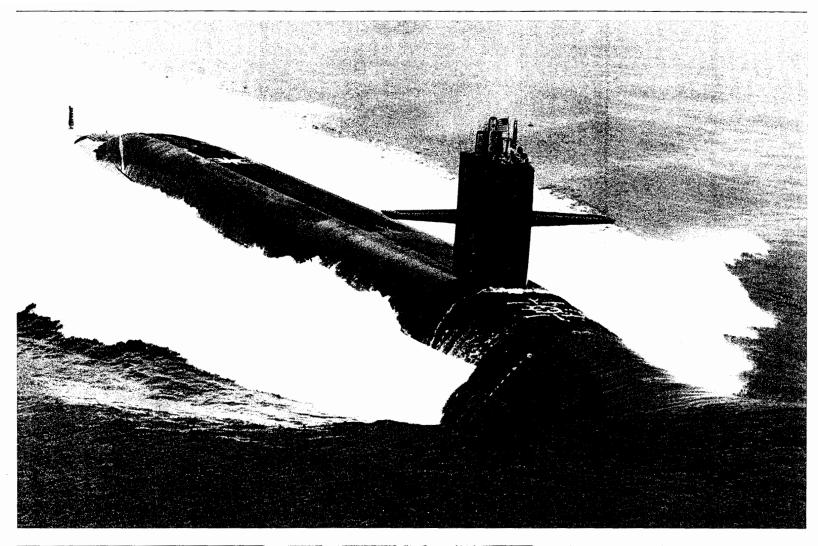
vation has been emphasized for many years energy savings per square foot from 1973 tl 1981 exceeded 45%.

#### Better ECG Analysis

A new IBM-designed electrocardiograp management and analysis system helps doct detect heart abnormalities. The system aids interpretation of electrocardiograms (ECGs) the graphic representations of electrical imputate cause the heart to beat. The computer makes thousands of high-speed measureme ECG data and then applies interpretive rules typically used by cardiologists. It prints a coreport for review by the physician. It can alshelp doctors identify changes in an adult patient's heart condition by comparing a ne ECG with previous analyses.

Experimental color display system developed by BM Italy features an enlarged screen with a very-high-lefinition image. The system is being tested at IBM scientific Centers in Madrid, Paris, Rome and Palo Alto, Calif., for applications ranging from satellite and nedical image processing to computer circuit design, oil exploration and publication printing.



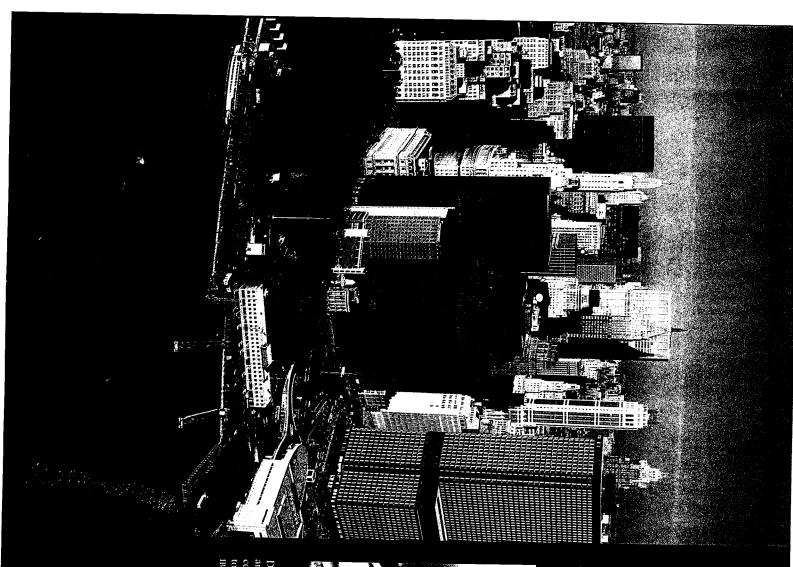






Left: Computer time and equipment contributed by IBM Taiwan assist scientists from 10 nations at the Asian Vegetable Research and Development Center, Tainan. Analysis of thousands of varieties of different vegetables is speeding development of more nutritious crops and better farm management in the tropics.

Far left: IBM vendor reclamation of gold, palladium and other precious metals from obsolete IBM computer circuits produced a \$25 million saving for the company in the U.S. during 1981. Such metals find use in high-density circuits for their superior electrical conductivity and corrosion resistance.





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